



**AIR QUALITY MANAGEMENT DISTRICT**  
330 Fair Lane, Placerville, CA 95667  
Phone: (530) 621-7501 Fax: (530) 295-2774  
<http://www.edcgov.us/AirQualityManagement>

## PERMIT TO OPERATE #10-625

Revocable and Non-Transferable  
Valid from 07-01-2012 until revoked or cancelled  
Permit fees due annually

**PERMIT ISSUED TO:**

El Dorado County Community  
Development Agency  
2850 Fairlane Ct  
Placerville CA 95667

**EQUIPMENT LOCATION:**

El Dorado County Union Mine  
Landfill  
5700 Union Mine Road  
El Dorado

This Permit is for the equipment described below and as shown on approved plans and specifications. Equipment operation is subject to the conditions listed on the following pages.

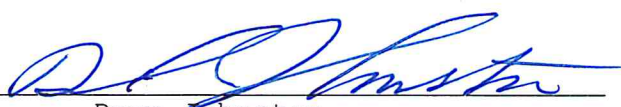
### Landfill with Collection System


Type	Solid Waste Landfill with Gas Collection
Maximum Capacity	< 2.5 million megagrams (2.75 million tons)
Nominal Capacity (approx.)	1.70 million megagrams (1.88 million tons)

The annual fees for this permit cover twenty hours of staff time; any additional hours required will be billed at the approved District rate.

This Permit does not authorize the emission of air contaminants in excess of limits allowed by federal, state, or district rules and regulations. Air Quality Management District Rules are available at District Office and [www.arb.ca.gov/drdb/ed/cur.htm](http://www.arb.ca.gov/drdb/ed/cur.htm)

BY

  
Dave Johnston  
AIR POLLUTION CONTROL OFFICER

  
ISSUE DATE

**THANK YOU FOR WORKING WITH US TO IMPROVE AIR QUALITY.**

**PERMIT TO OPERATE CONDITIONS**  
**EL DORADO COUNTY - UNION MINE LANDFILL**  
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All applicant proposals are conditions of approval unless otherwise specified herein.

**GENERAL CONDITIONS**

1. If any permit condition is found invalid, such finding shall not affect the remaining permit conditions.
2. **PERMIT ACCEPTANCE:** Permit acceptance is deemed acceptance of all conditions specified herein and acceptance of the El Dorado County Air Quality Management District (District) Rules and Regulations.
3. **OPERATION:** Equipment operation must be conducted in compliance with all data and specifications submitted with the application under which this permit was issued. (Rule 501, General Permit Requirements section 501.4.E)
4. **PERMIT AMENDMENT:** The District reserves the right to amend this permit, upon annual renewal, in order to insure facility compliance with District Rules and Regulations. (Rule 501, General Permit Requirements section 501.3.F)
5. **CHANGE OF OWNERSHIP:** The District must be notified prior to change of ownership, building, erecting, altering or replacing any article, machine, equipment or other contrivance, the use of which may cause, eliminate, reduce, or control the issuance of air contaminants. (Rule 501, General Permit Requirements section 501.3)
6. **UPSET/BREAKDOWN:** The District must be notified of any upset or breakdown. (Rule 516, Upset Breakdown Conditions)
7. **ADDITIONAL SOURCES:** The District must be notified prior to the addition, altering or replacement of any equipment or other contrivance, the use of which may cause, eliminate, reduce, or control the issuance of air contaminants. (Rule 501, General Permit Requirements section 501.3.A)
8. **NUISANCE:** A person shall not discharge from any source quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons, or to the public, or which endanger the comfort, repose, health or safety of any such persons, or the public, or which cause to have a natural tendency to cause injury or damage to business or property. (Rule 205, Nuisance)
9. **RIGHT OF ENTRY:** To enforce or administer any State or local law, order, regulation, or rule relating to air pollution, the Air Pollution Control Officer and his duly authorized agents shall have the right of entry to any premises on which an air pollution

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emission source is located for the purpose of inspecting such source, including securing samples of emissions there from or any records required to be maintained therewith by the District. The Air Pollution Control Officer or his duly authorized agent shall have the right to inspect sampling and monitoring apparatus as deemed necessary. (Rule 509, Authority to Inspect)

10. **PERMIT ON PREMISES:** The owner or operator shall maintain a legible copy of this permit on the premises of the subject equipment. (Rule 501, General Permit Requirements section 501.4.A)

**OPERATING CONDITIONS**

11. **COVER INTEGRITY:** Cover integrity shall be monitored on a monthly basis and repairs shall be implemented as needed.
12. **MAINTENANCE/OPERATION:** All gas collection and control equipment shall be maintained in good working order and operated by trained personnel at all times.
13. **WELLHEADS:** A sampling port and thermometer shall be installed at each wellhead. (40 CFR 60.756(a))
14. **WELL SIGHTING:** Active collection wells, horizontal collectors, surface collectors, or other extraction devices shall be sited at a sufficient density throughout all gas producing areas, except the following:
- (a) Any segregated area of asbestos or non-degradable material may be excluded from collection if documented as provided within this permit. The documentation shall provide the nature, date of deposition, location and amount of asbestos or non-degradable material deposited in the area, and shall be provided to the District upon request.
  - (b) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of ROC (NMOC) emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the District upon request. A separate ROC (NMOC) emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compare to the ROC (NMOC) emissions estimate for the entire landfill.
15. **EXTRACTION COMPONENTS:** The landfill gas extraction components, including the collection header pipes, shall be constructed of polyvinyl chloride (PVC), high-density polyethylene (HDPE), fiberglass, stainless steel, or other nonporous corrosion resistant material. Pipes shall be of suitable dimensions to convey projected amounts of gases and withstand planned

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overburden and traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to need to prevent excessive air infiltration.

16. **VERTICAL WELLS:** Vertical wells shall be placed to not endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches for piped wells and horizontal collectors shall be of sufficient cross-section to allow for proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed to not allow indirect short-circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension to not penetrate or block perforations.
17. **CONNECTER ASSEMBLY:** Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a closing valve, any necessary seals and couplings, access couplings and at least one sampling port.
18. **LANDFILL GAS:** The owner or operator shall convey the landfill gas to control system(s) (flare, turbines, etc.) through collection header pipe(s).
19. **NEW WELLS/COLLECTION DEVICES:** Wells shall be added to control new cells of the landfill within five years of any cell being closed. New collection devices shall be designed and certified to achieve comprehensive control of surface gas emissions by a professional engineer.
20. **LANDFILL GAS TRANSPORT:** The owner or operator shall operate the landfill gas collection blower(s) and transport landfill gases to the control system whenever there is sufficient landfill gas generation to support the operation of the control system. The owner or operator shall only transport landfill gases to a properly operating control system.

**MONTHLY MONITORING**

21. **NITROGEN OR OXYGEN CONCENTRATIONS:** The owner or operator shall do one of the following (a or b):
  - (a) Determine nitrogen concentrations on a monthly basis, in accordance with USEPA Method 3C; (40 CFR 60.756(a)(2) and 40 CFR 60.753 (c)(1)) or,

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- (b) Oxygen concentrations shall be determined on a monthly basis in accordance with EPA Method 3A (40 CFR 60.753(c)(2)) and 40 CFR 60.756(a)(2)), except:
- (i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;
  - (ii) A data recorder is not required;
  - (iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;
  - (iv) A calibration error check is not required; and,
  - (v) The allowable sample bias, zero drift, and calibration drift are 10 percent.
22. **GAS TEMPERATURE:** The temperature of the landfill gas shall be monitored on a monthly basis. (40 CFR 60.756(a)(3))
23. **WELLHEAD TEMPERATURE:** Each interior wellhead shall have a landfill gas temperature less than 55°C (131°F), with either a nitrogen gas level less than 20 percent or an oxygen gas level less than 5 percent. A higher operating temperature, nitrogen level or oxygen level may be established at a particular well provided that the owner or operator can demonstrate that the higher operating value does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. (40 CFR 60.753.c)
24. **GAUGE PRESSURE:** The gauge pressure in the collection header at each individual well shall be measured on a monthly basis. (40 CFR 60.756(a)(1))
25. **CORRECTIVE ACTION:** If a well exceeds any of the operating parameters found in LANDFILL GAS COLLECTION, MONTHLY MONITORING or if any points of positive pressure are found, action shall be taken to correct the situation within 5 calendar days. If correction cannot be made or negative pressure cannot be achieved within 30 calendar days of the first exceedance, the gas collection system shall be expanded within 120 days of the initial exceedance. Within 7 days of the problem being corrected, a report SHALL be submitted to the District detailing the problem, correction activities undertaken, the timeline of events surrounding the problem and correction.
26. **METHANE CONCENTRATION:** The collection system shall be operated so that the methane concentration is less than 500 ppm (parts per million) above background at the surface of the landfill as determined in accordance with this permit. (40 CFR 60.753(d))

**QUARTERLY SURFACE MONTIORING**

27. **SURFACE CONCENTRATION:** The owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a serpentine pattern spaced at no

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more than 25-foot spacing and must traverse each monitoring grid (AB 32 requirements, CCR 17 Section 95471) for each collection area once per calendar quarter using an organic vapor analyzer or flame ionization detector. The probe inlet shall be moved upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells. (40 CFR 60.753(d))

28. **SURFACE EMISSIONS MONITORING:** Surface emissions monitoring shall be performed in accordance with section 4.3.1 of EPA Method 21, except the probe inlet shall be placed within 5 to 10 centimeters of the ground.
29. **INSTRUMENTATION SPECIFICATIONS:** The following instrumentation specifications and procedures for surface emission monitoring devices shall be adhered to:
- (a) The portable analyzer shall meet the instrumentation specifications provided in section 3 of EPA Method 21, except "methane" shall replace all references to VOC;
  - (b) The calibration gas shall be methane, diluted to a nominal concentration of 500 ppm in air;
  - (c) To meet the performance evaluation requirements in section 3.1.3 of EPA Method 21, the instrument evaluation procedures of section 4.4 of EPA Method 21 shall be used; and,
  - (d) The calibration procedures provided in section 4.2 of EPA Method 21 shall be followed immediately before commencing a surface monitoring survey.
30. **EMISSIONS EXCEEDANCES:** During surface emission monitoring, a reading of 500 ppm or more above background is detected the following actions shall be taken:
- (a) The location of each exceedance shall be marked and recorded;
  - (b) Cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection shall be made and the location shall be re-monitored within 10 calendar days of initial detection;
  - (c) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and monitored again within 10 days. If the re-monitoring shows a third exceedance for the same location, the action specified in part (e) of this condition shall be taken.
  - (d) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring shall be re-monitored after 1 month. If the 1-month re-monitoring shows a concentration less than 500 ppm above background no further monitoring of that location is required until the next regularly scheduled monitoring. If the 1-month re-monitoring shows an exceedance, the actions specified in part (e) of this condition shall be taken.

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(e) For any location where monitored methane concentration equals or exceeds 500 ppm above background concentration three times within a quarterly period, a new well or other collection device shall be installed within 60 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the District as part of an Authority to Construct application.

31. **EXCESS EXCEEDENCES:** Any corrective action on the gas collection and control system shall not cause exceedances of other operational or performance standards.

**EMISSION LIMITATIONS**

32. **VISIBLE EMISSIONS:** No source of emissions shall be as dark or darker in shade as that designated as No. 1 (20% Opacity) on the Ringelmann Chart for a period or periods aggregating more than three (3) minutes in any one hour. (Rule 202, Visible Emissions)

**RECORD KEEPING AND REPORTING**

33. **LOG:** A log shall be maintained detailing the landfill maximum design capacity, the current amount of solid waste in-place, the year-by-year waste accumulation rate and the date/time and amount of waste (tons) added to the landfill.
34. **RECORDS:** The following records shall be maintained for the life of the control equipment.
- (a) The maximum expected gas generation flow rate, using a method approved by the District in writing; and,
  - (b) A map showing the location of well horizontal collectors, surface collectors, or other gas extraction devices.
35. **FLOW RECORDS:** The owner or operator shall keep up-to-date and readily accessible continuous records of the indication of flow to the control device.
36. **RECORDS RETENTION:** All record keeping logs shall be retained at the facility for no less than 5 years and shall be made available to District personnel upon request. (Rule 501, General Permit Requirements section 501.5.C.1)

END OF CONDITIONS

